

# **ROCB SERIES**



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## REMOTE OPERATED CIRCUIT BREAKER

The remote operated circuit breaker consists of a custom designed remote operated motor module (housed within a circuit breaker molding) coupled to a hydraulic-magnetic circuit breaker. The remote operated circuit breaker (ROCB) offers the convenience of remote ON, OFF, and Reset capability combined with the safety and accuracy of a standard magnetic current sensing device. This allows operation of the circuit breaker from various locations in a system, facility or site without sacrificing the ability to manually operate the breaker if required. Service, diagnostics, load shedding and power distribution control functions can now be performed in areas that were previously unattended or inaccessible.



#### Features

- Switch and trip indication
- · Standard 35mm rail mounting
- Precise overload protection
- Integrated auxiliary signals (active/passive)
- Manual priority
- Remote/on-site/maintenance mode
- Wide range of operating voltages
- Anti-interference control signal
- Failsafe function
- Power failure memory function
- Self-recovery function
- · Status indication
- Anti-static/surge/pulse



### **SPECIFICATIONS**

#### Motor

Rated operating voltage	Voltage range	
110VDC	77VDC-137.5VDC	

#### **Technical**

Breaker Poles	1-3 poles	
Life Cycle	10,000 times, 3 times per minute	
Voltage	80VDC, 110VDC, 240VAC, 415VAC	
Current	63A Max	
Vibrations and Shocks	MIL-STD-202, IEC 61373	
Venting	Sealed, non-sealed	
Fire and Smoke Certifications	NFPA130, EN45545-2	
Agency approval	UL1077, GB14048.2 TUV60947-2, IEC 60077-1: 2017, EN 50155:2017	

Switching Time	<1 second
Operating Temperature	-20 to +60 °C
Control Signal	110VDC (350~650) ms Square-wave pulse
Operating Current (Peak)	110VDC 0.25A 1S 25W
Static Current	< 30mA

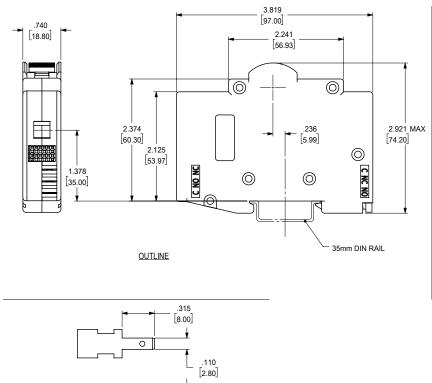
### **ELECTRICAL RATINGS & SHORT CIRCUIT INTERRUPTING CAPABILITIES**

Type (Decision 1, SHT.2)	Poles	Hertz	Max (Volts)	Rated (Amps)	Short Circuits (Amps)	Agency
ICLR / ICLHR	1, 2	N/A	80DC	0.50 - 63.0	10,000	
	1, 2	N/A	110DC	0.50 - 63.0	10,000	
	2	N/A	220DC	0.50 - 50.0	6,000	CCC (GB 14048.2)
	1, 2	50/60/400	240AC	0.50 - 63.0	6,000	&TUV (IEC 60947-
	1, 2	50/60/400	240AC	0.50 - 63.0	3,000	2) & CRCC
	2	50/60/400	415AC	0.50 - 25.0	6,000	
	3	50/60/400	415AC	0.50 - 50.0	3,000	
	1, 2, 3	N/A	110DC	0.50 - 63.0	10000	UL 1077 &CSA*
	1, 2, 3	50/60	240AC	0.50 - 63.0	6000	UL IU// &USA"

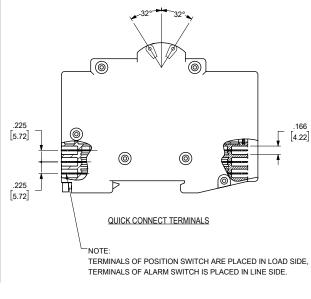
<sup>\*</sup>Model ICLR/ICLHR are supplementary Protectors listed to CSA Std. C22.2 No. 235

### **DIMENSIONS**

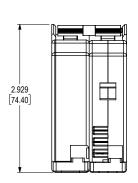
All dimensions are in millimeters

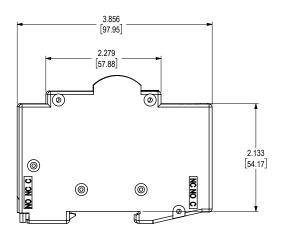


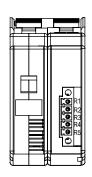
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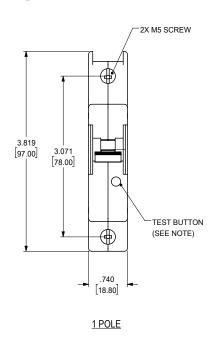
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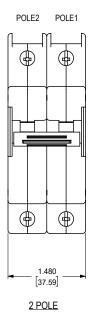


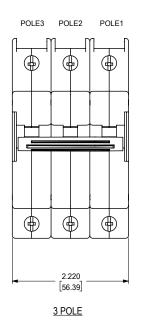


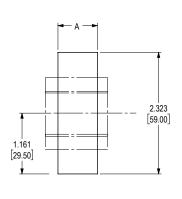


### PORT DEFINITION

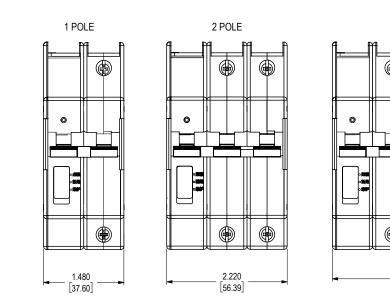


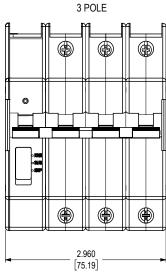






DIMENSION "A"		
1 POLE	0.755 [19.18] min	
2 POLE	1.520 [38.61] min	
3 POLE	2.270 [57.66] min	





Pin No.	Definition	Description
R1	VCC	DC110V+
R2	GND	GND
R3	Pulse - ON	Signal input, Turn CB ON
R4	Pulse - OFF	Signal input, Turn CB OFF
R5	CB indication	Output- Indicates CB contact position (0: ON 1: OFF), I≤30mA

#### **ORDERING OPTIONS**

ICLHR 11 - -1 - -61 - 10.0 - E - -00 - -C - RA

#### Type

ICLR one handle per unit

ICLHR one handle per pole

**ICLMR** one handle per unit with midtrip function **ICLMHR** one handle per pole with Mid-trip function

#### **Poles**

1: Single pole

11: Two pole

111: Three pole

#### Signal

- -0: Switch only
- -0A: Switch only with position switch\*\*
- -1: Series
- -1A: Series with position switch
- -1B: Series with alarm switch, mid-trip \*
- -1C: Series with position & alarm switch, mid-trip \*

Note:

- \*1. "1b" & "1c" Are Not Applicable For Configuration Of 415vac Which Sixth Decision Is "G" Or "I".
- 2. One Or More Descriptions May Be Use As Required For Multi-Poles Product. For Example, -11a1b, -1a1b1.
- \*\* "Oa" Only Tuv Certificates Are Available.

#### Frequency & Delay

SW: Switch only

- -41: 400Hz short delay
- -42: 400Hz long delay
- -43: 400Hz motor start
- -49: 400Hz 150% instant trip
- -51: DC short delay
- -52: DC long delay
- -53: DC motor start
- -59: DC 125% instant trip
- -61: 50/60Hz short delay
- **-62:** 50/60Hz long delay
- -63: 50/60Hz motor start
- -69: 50/60Hz 125% instant trip
- -71: DC/60Hz short delay
- -72: DC/60Hz long delay
- -73: DC/60Hz motor start
- **-79:** DC/60 Hz 135% instant trip

For inertial delay, add an "f" to any delay.

Note:

- 1. Delay 41 to 49 &delay 71 to 79 are not applicable for ul approved product
- 2. TUV has no "F" follow to delays

#### Rated Current (AMPS)

Use three numbers to print required value (see ratings table on sheet 1 for amp range, according to max. Volts and agency.)

#### **Circuit Breaker Module Configuration**

- -B: 80VDC 10KA NOTE:
- -C: 110VDC 10KA
- -D: 240VAC, Icu:3KA
- -E: 240VAC, Icu:6KA
- -F: 220VDC, 2 POLE 6KA
- -G: 415VAC, 2 POLE (SEE NOTE 2) 6KA
- -H: COVER VENTING TYPE
- -I: 415VAC 3 Phase 3ka (No Mid Trip)
- -K: Teminal Block For Aux. Switch
- -L: 35 Sqmm Wiring Box
- -T: Test Button
- 1. One Or More Descriptions May Be Used As Required. Could Be B, C, D, E, F, G, I Followed By Groups Of H, K, L &T
- 2. Decision "G" Is For 415vac, 2 Poles To Be Connected In Series.

#### **Handle Color**

- -00: Black Handle
- -10: Yellow Handle
- -20: Red Handle
- -30: Blue Handle
- -40: Green Handle
- -50: Gray Handle -60: Orange Handle
- -90: White Handle

#### Agency Approvals

- -C: CCC
- -R: CRCC
- -**U**: UL
- -T: TUV
- -A: CSA
- -N: NO AGENCY

#### **Remote Control Module Configuration**

RA: ROCB POWER: 110VDC

CONTROL: 110VDC PULSE SIGNAL: 110VDC **FUNCTION: A TYPE** 

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